

## MARINE DEBRIS

### What does the indicator tell us?

The marine debris indicator includes trash left behind by visitors to the beach, discarded from boats, carried by inland waterways to the coast, or conveyed by overflowing sewer or storm systems. As an indicator, marine debris can be useful in ascertaining (1) early warning signs of possible human health risk associated with pollution, (2) biological health risk such as entanglement or ingestion by wildlife, (3) limits on coastal recreation and fishing, (4) the effectiveness of programs to control or prevent marine debris, (5) the aesthetic value of a coastal area and the economy it supports, (6) ambient conditions, and (7) human health risks through entanglement, injury, or exposure to medical waste.

### How will the indicator be used to track progress?

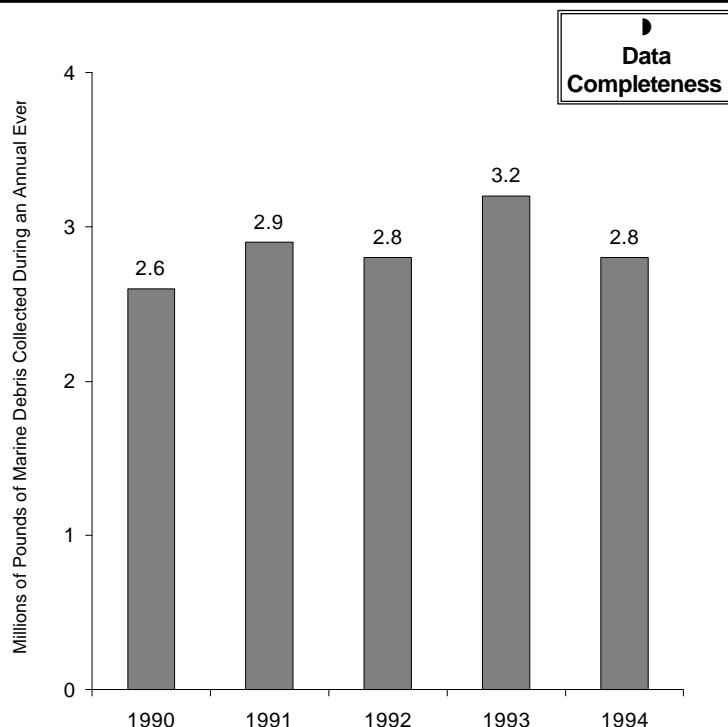
To measure this indicator a total of 20 survey sites in each of nine regions of the United States will be sampled. Volunteers will sample each site monthly for a period of 5 years, measuring the status and trends of 30 specific debris items. The program has been designed to answer two specific questions:

1. Is the amount of debris on our coastlines decreasing?
2. What are the major sources of the debris?

Even though this is a national survey, trend analysis will be computed for each region. Regional analyses can be combined to get a national picture of marine debris.

The National Marine Debris Monitoring Program is currently being coordinated by the Center for Marine Conservation (CMC) and is supported by EPA, the National Marine Fisheries Service, the National Park Service, and the U.S. Coast Guard.

### INDICATOR 18: Marine Debris



**Note:** Data in this graph are variable by number of beaches cleaned, number of volunteers participating, and weather conditions on the day of cleanup.

Source: Center for Marine Conservation, 1995.

## What is being done to improve the indicator?

**E**PA chairs an inter-agency workgroup that includes representatives from NOAA, the U.S. Park Service, the U.S. Coast Guard, and other federal organizations. The workgroup has developed a statistically valid methodology for monitoring the trends and sources of marine debris. Monitoring efforts using this methodology began in 1996, and currently are being coordinated by CMC with support from EPA and other federal agencies. Data obtained from these efforts will be used as a baseline for this indicator.

## What is being done to improve conditions measured by the indicator?

**M**arine debris causes harm to marine life, damages boats, endangers human health, and can cripple coastal economies. More than 255 species of animals are known to ingest or become entangled in marine debris. Marine debris disables fishing and recreational boats by engaging propellers or clogging cooling water intakes.

The economic impacts of marine debris on coastal communities has been demonstrated by beach closures in New York and New Jersey in 1987 and 1988 due to medical wastes washing up on the beaches. As more is learned about the sources of marine debris, regulatory efforts (e.g., the International Convention for the Prevention of Pollution from Ships (MARPOL Annex V) and stormwater permits) can be implemented to reduce the flow of debris into the marine environment. In addition, public education can be used to improve the environment. EPA and CMC have both developed a marine debris curricula for teachers and fact sheets for the public and industry.

Marine debris clean-up efforts can also help to reduce the risk of marine entanglement through removal of debris. CMC conducts annual beach

clean-up events that engage tens of thousands of volunteers. In addition, CMC's Million Points of Blight program is a storm drain stenciling project that reminds people that what they dump into the streets or down drains ends up in the connected waterway. Prevention is the best solution.

### ***For More Information:***

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